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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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02/06/2007

EXAMINER

RUHL, DENNIS WILLIAM

ART UNIT

PAPER NUMBER

3629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/980,105	ADACHI ET AL.	
	Examiner	Art Unit	
	Dennis Ruhl	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,6 and 8-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's response of 1/8/07 has been entered. The examiner will address applicant's remarks at the end of this office action.

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1,3,5,6,8-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 1,3,5,6,8-19, the claims are considered to be non-statutory because the apparatus/system claims are reciting structure to a system and claiming the use of the recited structure in the same claim. This is a mixing of two distinct statutory classes of invention, namely apparatus and process claims. A single claim cannot be a mix of an apparatus claim and a method claim, this renders the claims as non-statutory. The language in the claims such as "transmits information relating to a request of refueling the construction machine to a tie-up station side device provided at a tie-up station which refuels the construction machine, based on the obtained information relating to the residual fuel amount" is a recitation directed to using the claimed structure of the base side transmitter. The added language to claim 3 is another example of a method recitation of using structure of an apparatus claim. Claim 5 is directed to just a method step of what kind of data is transmitted by the transmitter. The recitations that are claiming an actual step of performing an action with a recited structural element of the claim renders the claims non-statutory.

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,3,5,6,8-19, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 1,3,5,6,8-19, it is not clear as to what statutory class of invention the claims fall into. Are they apparatus claims as the preamble indicates (i.e. A construction machine refueling system)? Are they method claims as indicated by the language "*a base station side transmitter that.....,and transmits information relating to a request of refueling the construction machine to a tie-up station side device provided at a tie-up station which refuels the construction machine, based on the obtained information relating to the residual fuel amount*".? One wishing to avoid infringement would not know if infringement would occur by just having the claimed structure of the system or if infringement would occur if one had the claimed structure and used the claimed structure by transmitting the claimed information as applicant has claimed. Are the method steps required for infringement? One wishing to avoid infringement would not know if the method language is just directed to the intended use of the system or if the steps are required as part of the scope of the claim. This issue is also further confused because applicant has argued in their most recent response/arguments that the prior art does not teach a base station transmitter that transmits a request to a tie-up station, which is directed to a method step of actually using the recited structure. From this argument one would assume that the method steps are required, which is not what

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apparatus claims are for. Apparatus claims are for reciting structure (tangible real world). The claims are considered indefinite.

For claims 1,3,5,6,8-19, it is also not clear as to whether or not the "tie-up station side device" and the "tie up station" are being claimed as part of the construction machine refueling system. This is because the only place the tie-up station and the tie-up station side device are mentioned is in the intended use language that describes what kind of data the transmitter is to transmit. One wishing to avoid infringement would not know if the tie-up station and the tie-up station side device are part of the claimed system or not. This renders the claim indefinite.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 8-13,16,17, are rejected under 35 U.S.C. 102(e) as being anticipated by Kane et al. (6078850).

For claims 8-13,16,17, Kane discloses a construction machine refueling system. Kane discloses trains and the examiner considers that trains satisfy the claimed "construction machine" because trains are machines and trains transport construction supplies and equipment across the country. Trains are considered to fall in the scope of

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the term "construction machine". The fuel sensor of the train is 21 and transmits fuel level data to base station 3. The base station has a receiver that receives the fuel data. Kane discloses that the base station 3 that has a processor that receives the fuel data from the trains. The processor also has software (a selector) that polls various refueling locations (fixed and mobile) for pricing information for fuel, and based on the received fuel pricing information, the train location, and the train fuel level, determines the best location for refueling. See column 4, lines 31-53 as well as the entire patent to Kane. The communication device is inherent to Kane because Kane polls refueling locations for pricing data. This requires a communication device to be able to send out a request for information (i.e. necessarily required). The communication device of Kane is capable of carrying out communications to send a request as claimed. The language reciting that the communications device *carries out communications with the refueling station to send a request* for refueling is claim language that has been interpreted to the extent that the prior art must be capable of doing what is claimed. This language is directed to the intended use of the communications device. In apparatus claims a recitation directed to the intended use of the device must result in a structural difference from the prior art. In this case the examiner only sees a communication device being claimed, one that is capable of "carrying out communications" with the intent of that step being "to send a request for refueling". That ability is inherent to the ability of Kane. Kane carries out communications with refueling stations to acquire pricing data. This satisfies the ability of the prior art to "carries out communications with the refueling

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station". The language of "to send a request" is the intended result of the "carries out communication" step.

With respect to claim 17, the actual "request" to refuel is not a structural part of the claimed system and recites no further structure to what is claimed in claim 16. The request is not a part of the system, but is a collection of data that the system uses in its operation. Kane satisfies what is claimed.

7. Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Apsell et al. (6292724).

Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. In column 5, lines 40-49 it is disclosed that the sensors may also be provided with the ability to activate the transponder in the event that an alarm condition is detected. The alarm condition can be operational parameters being out of range or safe values, or out of ranges for equipment location or out of ranges for allowed times of operation, etc..

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See column 3, line 64 to column 4, line 2, where it is disclosed that location information is transmitted as claimed to the base station, which receives the information by using a *receiver*. The base station is also provided with a *transmitter* (communication relay S, see figure 1). See column 5, lines 45-49 where it is disclosed that special requests can be made to the transponder to transmit data to the base station. This request is sent through the base station side transmitter. The base station transmitter is capable of sending out requests in the form of data. With respect to the recitation that the base station *transmits a request to a tie-up station*, as well as the other language directed to the transmission of certain data, because the claims are apparatus claims and not method claims, this limitation has been considered only to the extent that the prior art must be capable of doing what is claimed. In this case, Apsell is fully capable of doing what is claimed because of the existence of the transmitter S. The examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Applicant has claimed two structural elements, a receiver and a transmitter, both of what are disclosed in Apsell.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1,3,5,6,14,15,19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Apsell et al. (6292724).

For claims 1,3,5, Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. In column 5, lines 40-49 it is disclosed that the sensors may also be provided with the ability to activate the transponder in the event that an alarm condition is detected. The alarm condition can be operational parameters being out of

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range or safe values, or out of ranges for equipment location or out of ranges for allowed times of operation, etc.. Not disclosed is that if the fuel level drops below a certain level, information indicating the fuel level is transmitted to the base station by the transmitter. In addressing this issue the examiner takes "official notice" that it is old and well known in the art of vehicles to have a low fuel indicator (usually a light and a noise) to indicate to the driver that the vehicle is low on fuel. This indication is done when the fuel level drops below a certain value. This is done to alert the operator that the fuel level is low and allows one to refuel in a timely manner so that you do not run out of fuel. This feature is old and well known in the art. Taking this fact into account, and in view of the disclosure in column 5, lines 40-49 concerning the sensors and alarm conditions pertaining to operational parameters being out of range or safe values, one of ordinary skill in the art at the time the invention was made would have found it obvious to modify Apsell to detect when the fuel level (an operational parameter) of a vehicle drops below a certain value, and to transmit that fact to the base station, so that it can be determined whether or not a fuel truck needs to be sent out, and if so, how much fuel is needed (from column 4, lines 50-56). An alert of low fuel level is already known in the art. Based on this fact and the teaching of Apsell that operational parameter alarm conditions for the sensors are transmitted to the base station, one of ordinary skill in the art would have been motivated to modify Apsell as set forth by the examiner. See column 3, line 64 to column 4, line 2, where it is disclosed that location information is transmitted as claimed to the base station. The base station is also provided with a transmitter (communication relay S, see figure 1). See column 5, lines

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45-49 where it is disclosed that special requests can be made to the transponder to transmit data to the base station. This request is sent through the base station side transmitter. The base station transmitter is capable of sending out requests in the form of data. With respect to the recitation that the base station *transmits a request to a tie-up station*, as well as the other language directed to the transmission of certain data, because the claims are apparatus claims and not method claims, this limitation has been considered only to the extent that the prior art must be capable of doing what is claimed. In this case, Apsell is fully capable of doing what is claimed because of the existence of the transmitter S. The examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

For claims 6,19, Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the

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equipment operator. The operation wants to know how much fuel is left in the vehicles so that it can be determined whether or not a truck needs to be sent out to refuel the vehicle and if so, how much fuel is needed. Not disclosed is that the base station has a determination unit that determines whether or not the received fuel level is below a specified value. In addressing this issue the examiner takes "official notice" that it is old and well known in the art of vehicles to have a low fuel indicator (usually a light and a noise) to indicate to the driver that the vehicle is low on fuel. This indication is done when the fuel level drops below a certain value. This is done to alert the operator that the fuel level is low and allows one to refuel in a timely manner so that you do not run out of fuel. This feature is old and well known in the art. Taking into account that the reason the fuel level is being transmitted to the base station is so that it can be determined when certain vehicles need refueling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base station with a determination unit (software program) that determines whether or not the received fuel level is below a specified value, so that the operator can be alerted to vehicles that have low fuel levels and that will need refueling in the near future. This is the reason the fuel level is being tracked, so that you can ensure the vehicles do not run out of fuel. The base station is also provided with a transmitter (communication relay S, see figure 1). See column 5, lines 45-49 where it is disclosed that special requests can be made to the transponder to transmit data to the base station. This request is sent through the base station side transmitter. The base station transmitter is capable of sending out requests in the form of data. With respect to the recitation that the base

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station *transmits a request to a tie-up station*, as well as the other language directed to the transmission of certain data, because the claims are apparatus claims and not method claims, this limitation has been considered only to the extent that the prior art must be capable of doing what is claimed. In this case, Apsell is fully capable of doing what is claimed because of the existence of the transmitter S. The examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

For claims 14,15, the base station of Apsell has a receiver and a transmitter that satisfies what is claimed. This has been addressed with claim 1. With respect to the “invoice creating unit” that creates an invoice, the prior art does not disclose this feature. In Apsell, information relating to the construction machines (such as fuel levels) is received at the base station so that the owner can efficiently and better manage and service their equipment. The data received at the base station is important to the owner of the company that owns the fleet of construction machines. In view of this fact, one of ordinary skill in the art at the time the invention was made would have been motivated to record and store the data relating to the construction machines, so that the owner has a record on file of the usage of certain machines including fuel usage data. With respect to an invoice, this term is broad and reads on the creation of a document that specifies information for a construction machine, such as a report on a machine that indicates how much fuel is needed because fuel is too low. The claimed invoice can

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simply be a document that specifies how much fuel a given machine needs or was given. One of ordinary skill in the art at the time the invention was made would have found it obvious to provide the base station computer system of Apsell with a invoice creating unit that can create a document that shows how much fuel a given construction machine needs or was given. To "*create an invoice based on the refueling information received by the receiver*" is very broad language and is satisfied by the recording of fuel data amounts in a file or report. This is something that one of ordinary skill in the art would have found as obvious based on the teachings of Apsell and the information that Apsell is concerned with (fuel).

11. Claims 8-13,16,17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Apsell et al. (6292724) in view of Kane et al. (6078850).

Apsell discloses the invention substantially as claimed. Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a communication device/receiver S of a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel

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sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. The operation wants to know how much fuel is left in the vehicles so that it can be determined whether or not a truck needs to be sent out to refuel the vehicle and if so, how much fuel is needed. Not disclosed is that there is a selector that selects an optimum refueling location based on the information received. Kane discloses a system and method for fuel management of trains. Kane discloses that there is a central station 3 that has a processor that receives fuel data from the trains. The processor also has software (a selector) that polls various refueling locations (fixed and mobile) for pricing information for fuel, and based on the received fuel pricing information, the train location, and the train fuel level, determines the best location for refueling. See column 4, lines 31-53 as well as the entire patent to Kane. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Apsell with a selector software program that can poll various refueling locations for pricing information and can determine where the best location is to refuel, as taught by Kane. This would allow the cost savings discussed by Kane to be obtained by the system of Apsell. With respect to the recitation that the selector carries out communication with the refueling location selected by the selector to send a refueling request, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the selector that selects the best refueling location, also send a request to that station for refueling of the vehicle so that the vehicle can be refueled.

12. Applicant's arguments filed 1/8/07 have been fully considered but they are not persuasive.


With respect to the prior art rejections, applicant has generically argued that no prior art transmits the claimed type of request data by the transmitter (or the communications device). This argument is directed to the intended manner of using the device and is not persuasive for the currently pending apparatus claims. The prior art discloses what is claimed as far as an apparatus goes. The currently pending claims are not method claims,

With respect to the previous office action and the various comments and interpretations taken by the examiner that were set forth, as well as the reasoning for the 103 obviousness rejection, applicant has not challenged any of them, so they are taken to be proper. Applicant's silence on the taking of official notice, the obviousness statements in the 103 rejections, and other claim interpretation statements is taken as their agreement that the statements are proper, otherwise, a showing of *the errors* of the previous action and the examiners rejection was required by 37 CFR 1.111.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Ruhl whose telephone number is 571-272-6808. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DENNIS RUHL
PRIMARY EXAMINER